

-1- (JAPIO)

ACCESSION NUMBER

84-121780

TITLE

CELL

PATENT APPLICANT

(2000353) TOSHIBA BATTERY CO LTD

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APPLICATION DETAILS

82.12.03 82JP-212117, 57-212117

SOURCE

84.11.08 SECT. E, SECTION NO. 277; VOL. 8, NO. 243,  
PG. 8.

INT'L PATENT CLASS

H01M-004/42; H01M-006/22

JAPIO CLASS

42.9 (ELECTRONICS--Other)

ABSTRACT

PURPOSE: To prevent self dissolution of zinc and to improve discharge reaction performance by employing zinc particles mainly composed of zinc containing more than one kind of indium, gallium, tarium or lead while added with specific amount of mercury and setting the shape in specific range.

CONSTITUTION: A negative pole 4 is mainly composed of zinc containing 0.5% of gallium, 0.5% of indium, 0.1% of tarium and 0.7% of lead, for example, then added with 0.5-3wt% of mercury to produce amalgamized zinc particles which is filled together with electrolyte of viscous aqueous solution of caustic potash. Here concentration of caustic potash solution is made 30% of KOH while sodium salt of carboxyl methyl cellulose is employed as viscous agent. Here viscosity of electrolyte removed of zinc particle is 7,000 CPS while concentration of zinc in electrolyte is 5% and CO<sub>2</sub> amount is 0.8%. While particle shape distribution is made such that particles having long axis shorter than 0.3mm and short axis longer than 0.05mm will be more than 50%. With such structure, utilization of zinc particle is improved resulting in better discharge characteristic.